

CARPIAS RICHARDSON 1902, A SENIOR SYNONYM OF
BAGATUS NOBILI 1906, AND THE VALIDITY OF
CARPIAS MINUTUS (RICHARDSON 1902)
(ISOPODA: ASELLOTA: JANIRIDAE)

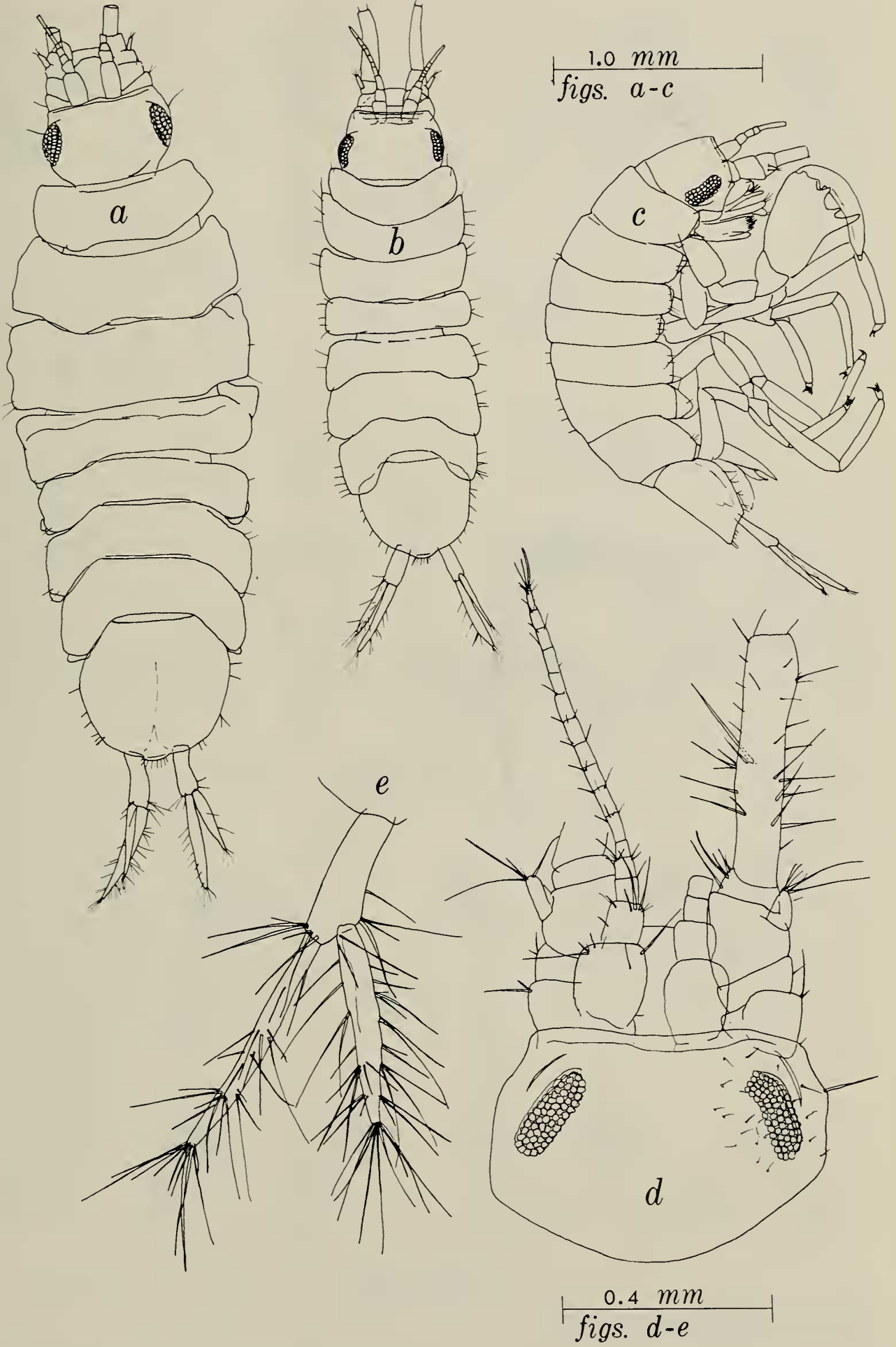
Thomas E. Bowman and Byron F. Morris

Abstract.—Illustrations and descriptions of *Carprias bermudensis* Richardson and *Janira minuta* Richardson are offered as evidence that these species are distinct and not synonymous as claimed by Menzies and Glynn (1968). However, their opinion that *Carprias* Richardson and *Bagatus* Nobili are synonyms appears to be justified, and the genus takes the older name *Carprias*.

The genus *Carprias* was proposed by Richardson (1902) for a small asellote isopod of the family Janiridae from Bermuda, characterized by having extraordinarily large gnathopods in the male, longer than the entire body. The 1902 description and figures of *C. bermudensis* were repeated in her 1905 monograph. No new records appeared until 1968, when Miller (1968) reported it from Florida. The same year Menzies and Glynn (1968) reported its occurrence in the vicinity of La Parguera, Puerto Rico, and transferred it to the genus *Bagatus* Nobili (1906). Another Bermudan asellote, *Janira minuta* Richardson (1902), which had been transferred to *Bagatus* by Nordenstam (1946), was declared by Menzies and Glynn to be a synonym of *Bagatus bermudensis*.

Nobili (1906, 1907) made no mention of *Carprias* when he proposed *Bagatus*, and Richardson's (1902) work on Bermudan isopods is not cited in either of Nobili's papers. Either Nobili was unaware of *Carprias*, or considered it generically distinct from *Bagatus*. Inaccuracies in Richardson's description have puzzled others; Wolff (1962:45) noted that "the mandible seems to be totally without molar process according to fig. 505a, but Miss Richardson does not mention this feature in her description." In fact, *C. bermudensis* has a well developed molar.

In his key to genera of Janiridae, Menzies (1962) separated *Carprias* from *Bagatus* by the presence of a dactyl on pereopod 1 in *Carprias* and its absence in *Bagatus*. In the type-species of *Bagatus*, *B. stylodactylus*, the



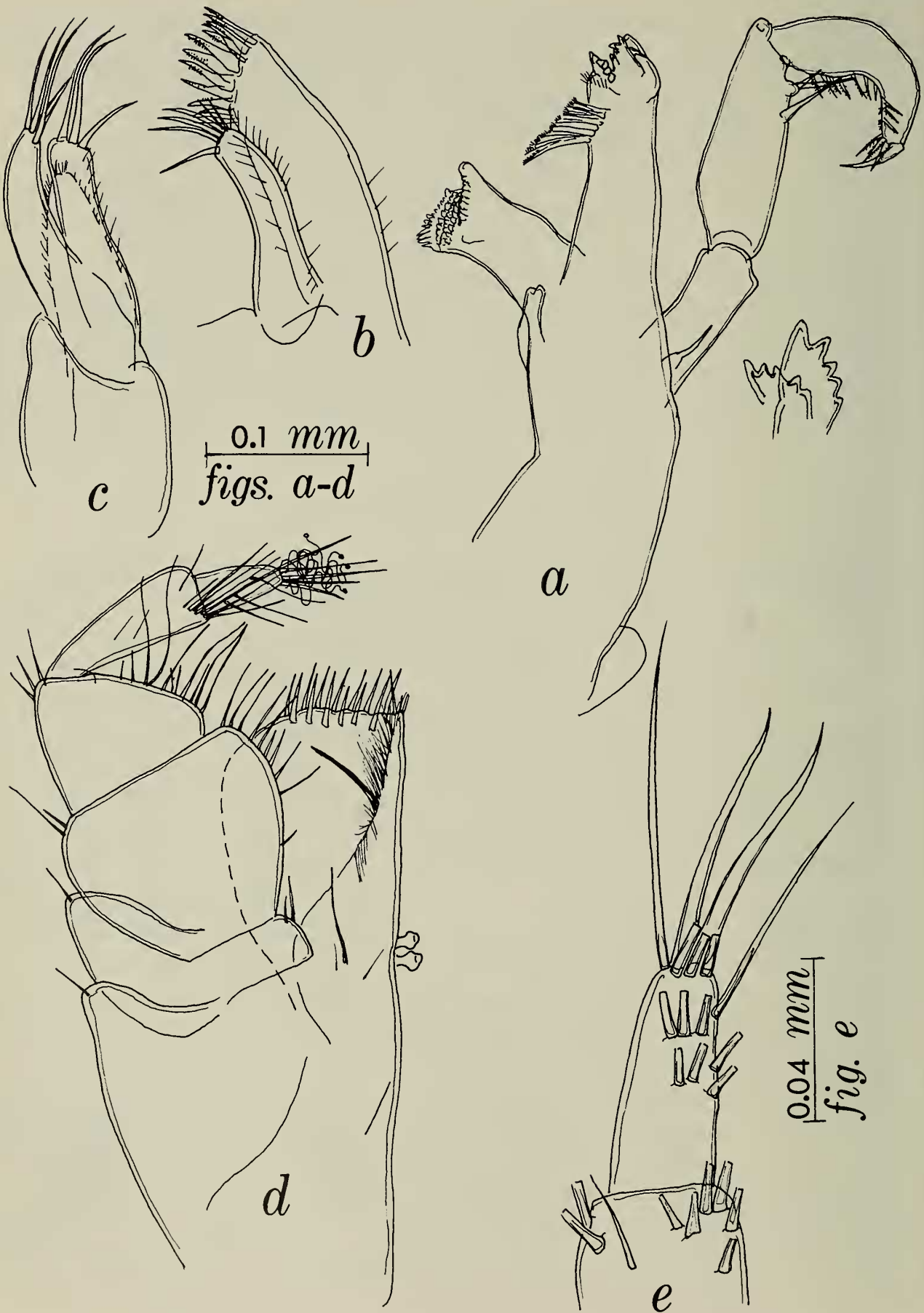


Fig. 2. *Carpias minutus* ♀: a, Left mandible; b, Maxilla 1; c, Maxilla 2; d, Maxilliped; e, Maxilliped, distal segment of palp.

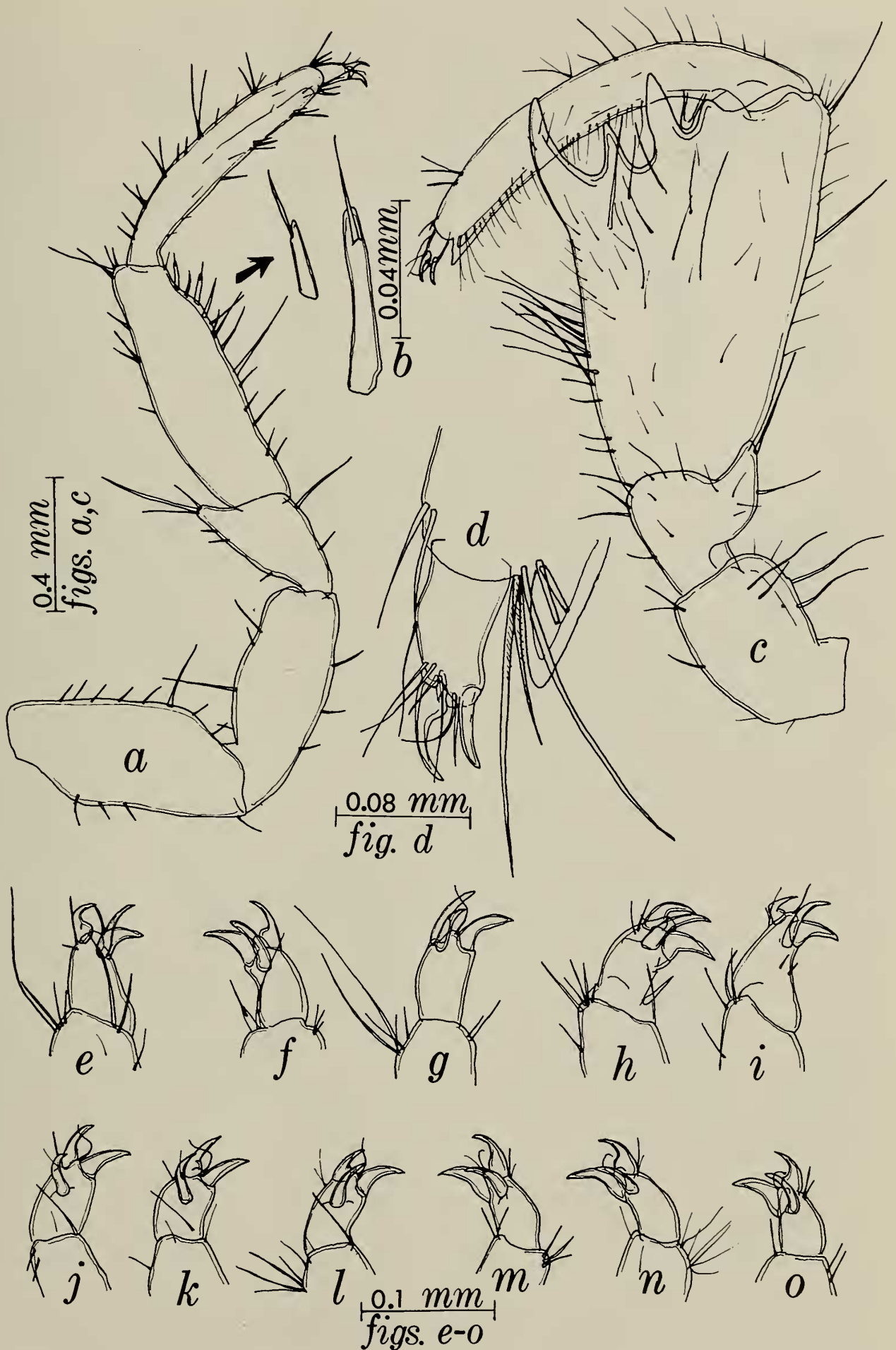


Fig. 3. *Carpias minutus*: a, Pereopod 1, ♀; b, Spine from carpus of same; c, Pereopod 1, ♂; d, Dactyl and distal end of propus of same; e-i, Dactyls of ♀ pereopods 2, 3, 4, 6, 7; j-o, Dactyls of ♂ pereopods 2-7.

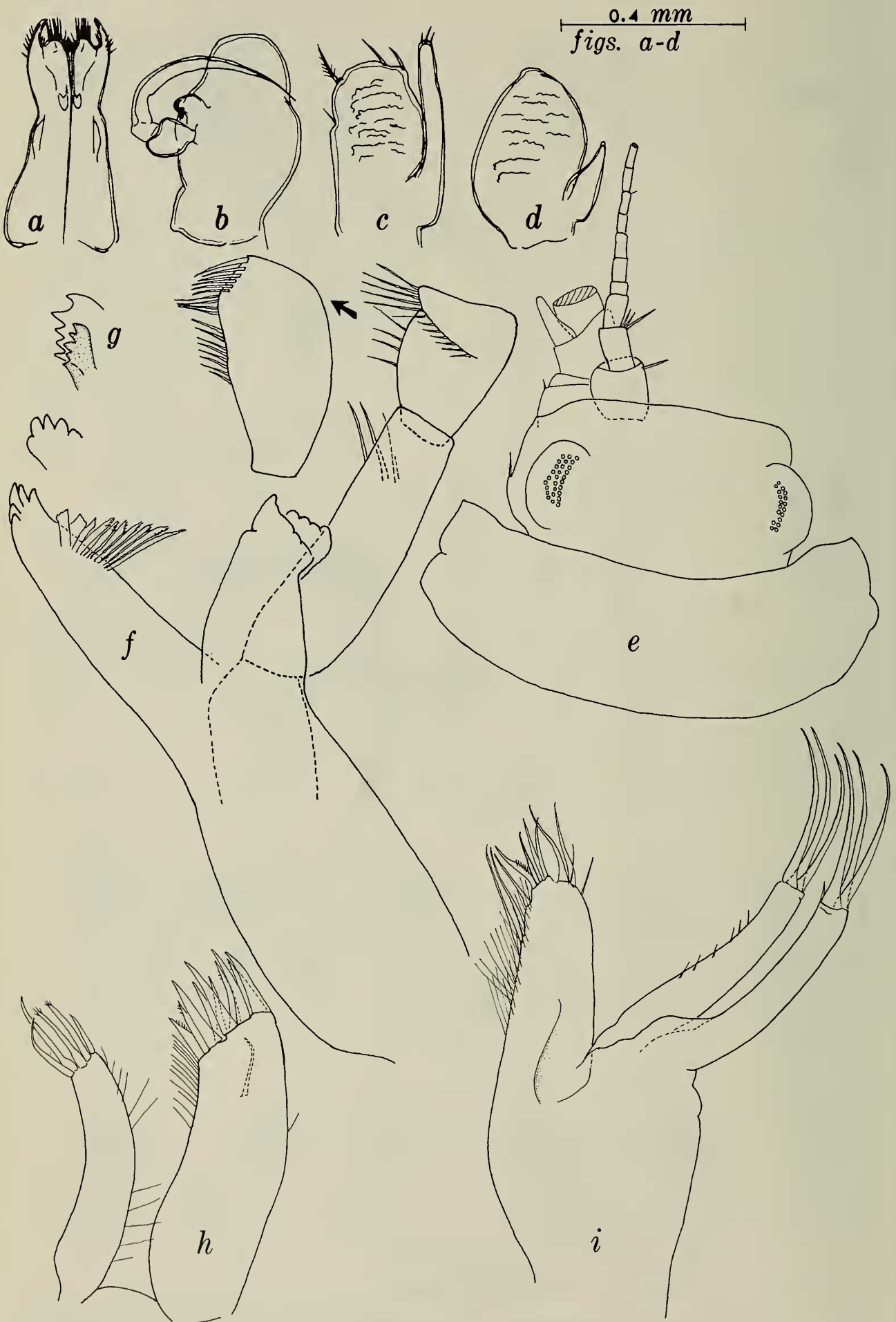


Fig. 4. *Carpias minutus* ♂: a-d, Pleopods 1-4. *Carpias bermudensis* ♂: e, Head and pereonite 1, dorsal; f, Right mandible; g, Incisor and lacinia of left mandible; h, Maxilla 1; i, Maxilla 2.

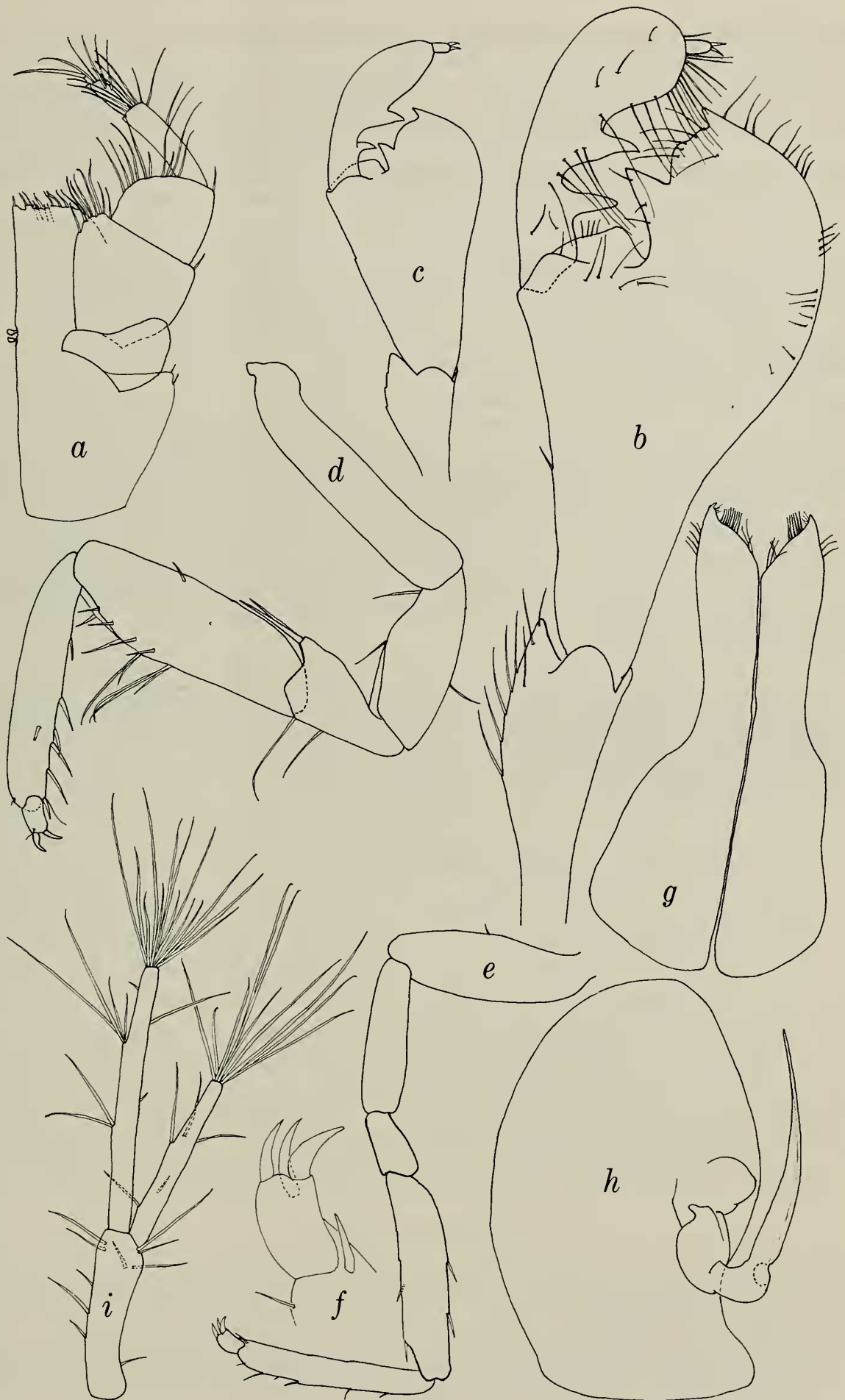


Fig. 5. *Carpias bermudensis*: a, Maxilliped; b, Pereopod 1, adult ♂; c, Pereopod 1, juvenile ♂ (2 mm), setae omitted; d, Pereopod 1, ♀; e, Pereopod 7, ♀; f, Dactyl of same; g, Pleopod 1, ♂; h, Pleopod 2, ♂.

dactyl is reduced to a small knob, but in other species the dactyl is well developed as in *Carpias*.

No other differences between *C. bermudensis* and *Bagatus* spp. have generic value. The enormous δ pereopod 1 of the former is quantitatively rather than qualitatively different from this pereopod in δ *Bagatus*. Menzies and Glynn were quite justified in fusing the 2 genera. However, they erred in using the younger name, *Bagatus*, rather than the older *Carpias*. All species of *Bagatus*, the 9 listed by Monod (1961) and *B. serricaudus* Menzies and Glynn (1968) must be transferred to *Carpias*. *Janira falcifera* Barnard (1962) has a very large δ pereopod 1; hence it appears to be a *Carpias*.

While we agree that *Carpias* and *Bagatus* are congeneric, we do not accept Menzies and Glynn's (1968) proposition that *C. bermudensis* and *C. minutus* are the same species. We discuss below differences we have found between *C. minutus*, based on specimens taken from *Sargassum* off Bermuda, in which it is common (Morris and Mogelberg, 1973), now deposited in the National Museum of Natural History, and syntypes of *C. bermudensis* (USNM 24865). The latter are in poor condition, but enough details could be discerned to confirm the distinctness of the 2 species and to give the comparison that follows.

The lateral margins of pereonite 1 are incised in *C. bermudensis*, but not in *C. minutus*. The mouthparts are similar, with minor differences in setation. Mandibular palp segment 3 is longer and narrower in *C. minutus*; the incisors and lacinia are 5-cusped in both species.

The δ pereopod 1 shows great differences in both young and fully mature specimens. The merus is very elongate in *C. bermudensis*. The carpus is deltoid in *C. minutus*, elongate-mitten-shaped in *C. bermudensis*; its palm is transverse in *C. minutus*, oblique in *C. bermudensis*, and has 3 teeth in *C. minutus* (including the long distal tooth), 2 in *C. bermudensis*. The propus of *C. minutus* is toothless and has parallel margins; that of *C. bermudensis* has 2 teeth and widens distally into a bulbous apex. The dactyls of both species are biungulate in pereopod 1, triungulate in pereopods 2-7.

The δ pleopod 1 has stronger outer lobes in *C. minutus*. Inner lobes are developed in *C. minutus*, not in *C. bermudensis*. The δ pleopod 1 is a most important character in Janiridae taxonomy, and one would be justified in separating *C. bermudensis* from *C. minutus* on this character alone.

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(TEB) Department of Invertebrate Zoology, Smithsonian Institution, Washington, DC 20560; (BFM) Outer Continental Shelf Office, Bureau of Land Management, 555 Cordova St., Box 1159, Anchorage, AK 99501.